



Association Report 2024

Aug 2025

ecorisQ.

International association for natural hazard risk management
www.ecorisq.org

Our mission

To promote sustainable solutions - preferably nature-based - for reducing natural hazard risks.

We do this by bridging science and practice to develop and disseminate transparent, reproducible tools for hazard and risk analysis

What we do

- Creating and maintaining an international community focused on natural hazard risk management
- Facilitating the sharing of expertise and distributing innovative, transparent tools for hazard analysis
- Initiating and supporting R&D projects in areas aligned with our mission
- Advancing the harmonization of analytical methods and contributing to discussions on best practices

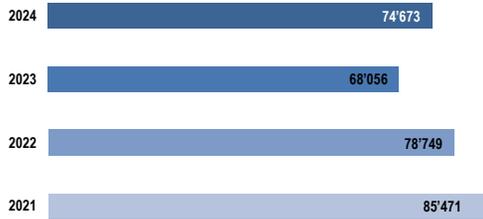
What the Q in ecorisQ stands for

The Q reflects the principles that guide our work:

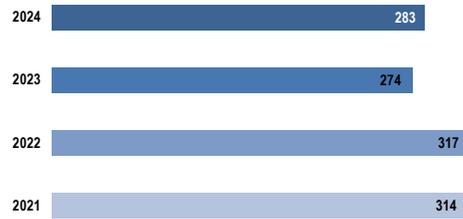
- Quality - Upholding the highest standards of professionalism
- Quantified - Grounded in data, facts, and sound scientific knowledge
- Quartermaster - Equipping professionals with forward-thinking tools
- Quaternary - Addressing risks across temporal scales. Spatially we deal with scales ranging from single slopes to entire watersheds

Key information

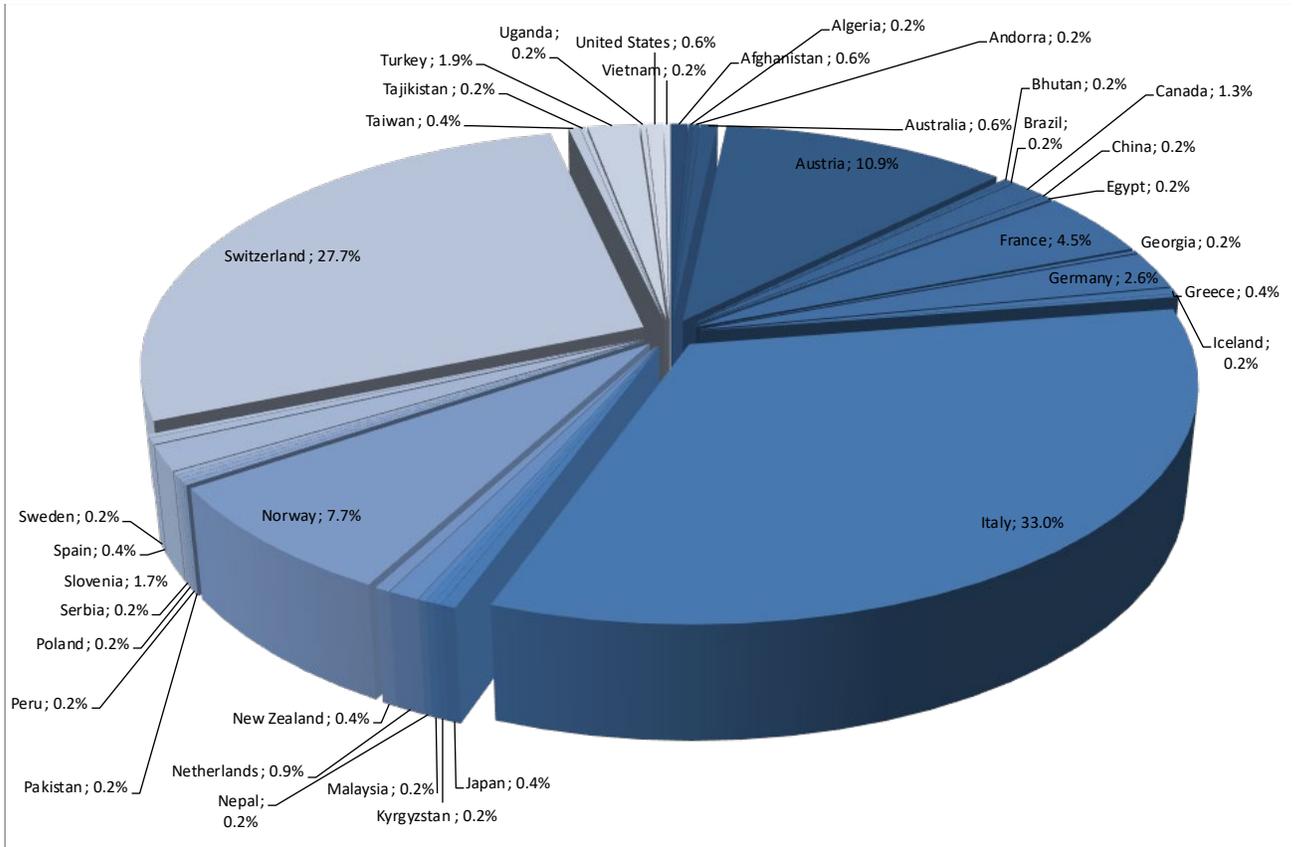
Revenue (CHF)



Nr. of members / member organisations (-)



Countries of members



Member types

| | 2024 | 2023 | 2022 | 2021 |
|-------------------------------------|------|------|------|------|
| Private sector | 66% | 64% | 63% | 60% |
| Universities / schools | 18% | 19% | 22% | 24% |
| Research institutes | 3% | 3% | 2% | 4% |
| Administration | 8% | 8% | 8% | 8% |
| Other (non-professionals, NGO, ...) | 5% | 6% | 5% | 4% |

| Budget (in CHF) | Result 2021 | Result 2022 | Result 2023 | Result 2024 | Planning 2025 |
|---|--------------------|--------------------|--------------------|--------------------|----------------------|
| General assembly | 23'263 | 20'682 | 6'155 | 833 | 0 |
| Travel & representation costs | 2'858 | 8'600 | 9'575 | 7'388 | 4'000 |
| Meeting registration / sponsoring / memberships | 6'112 | 788 | 6'388 | 5'513 | 1'000 |
| Association administration and management | 12'908 | 10'424 | 6'040 | 5'865 | 8'000 |
| PR & communication | 10'504 | 4'128 | 2'345 | 1'693 | 1'500 |
| Training courses | 0 | 9'689 | 0 | 770 | 1'000 |
| Publications | 0 | 8772 | 0 | 0 | 3500 |
| Tool development | 25'713 | 27'747 | 41'789 | 20'711 | 35'000 |
| Website hosting & development | 7'055 | 689 | 638 | 2'271 | 15'000 |
| Bank charges | 130 | 126 | 111 | 178 | 200 |
| Total expenses | 88'543 | 91'645 | 73'041 | 45'222 | 69'200 |
| Membership contributions | 69'394 | 67'704 | 67'403 | 71'253 | 70'000 |
| Meeting registrations | 15'327 | 3'369 | 653 | 0 | 0 |
| Training courses | 750 | 7'676 | 0 | 3'420 | 0 |
| Project work | 0 | 0 | 0 | 0 | 0 |
| Funding/subsidies/donations/sponsoring | 0 | 0 | 0 | 0 | 0 |
| Total income | 85'471 | 78'749 | 68'056 | 74'673 | 70'000 |
| Total expenses | 88'543 | 91'645 | 73'041 | 45'222 | 69'200 |
| Total income | 85'471 | 78'749 | 68'056 | 74'673 | 70'000 |
| <i>Reserve preceding year</i> | 84'444 | 81'372 | 68'476 | 63'491 | 92'941 |
| Net result | 81'372 | 68'476 | 63'491 | 92'941 | 93'741 |

Activities 2024

Tool development

In 2024, we worked on the revision of Rockyfor3D (v6.0). This version, well documented in the updated manual and the [news post on our website](#), has been released and tested by many member organisations. First feedbacks showed that it is considered quite optimistic.

The tool SlideforMAP (for spatially explicit assessment of the disposition of shallow landslide) has undergone several improvements. Among the key updates is the option to specify the rainfall intensity spatially using a raster instead of a constant uniform value. Another improvement is the possibility to calculate root reinforcement using a two-species mixed forest formulation with a mixing index raster that specifies the proportion of one of the two species. The multi-species root reinforcement formulation, where each tree location is associated with a specific species, has also been updated. In addition, SlideforMAP now includes the hydrological model of Iversen (2000) which describes the short-term saturated transient response of pore-water pressure in response to a rainfall event. This complements the existing TOPOG model which represents the long-term steady state response. Finally, two models of infiltration (Bonetti et al 2021 and Stone et al 2008) have been implemented in SlideforMAP to compute actual infiltration as a function of rainfall rate.



The BankforNET web application was updated with a new interface with a "Basic" and "advanced" mode for easier user interaction (version 3.7.0). This new version calculates stream sediment transport including both fluvial bedload sediment transport and debris-flow transport with an improved parameterization of stream bed surface roughness. The large wood transport capacity model remains empirical but has been improved. An upcoming update of BankforNET (version 3.8.0) will now have the possibility to include bed erosion in addition to bank erosion. Coupled to depth-dependent root reinforcement, this is an important improvement for estimating the effects of vegetation in stabilizing streambanks and preventing erosion.

General assembly and conference

We were actively present as a sponsor at the Interpraevent 2024 conference, which took place from 10 to 13 June 2024 in the Conference Center Hofburg Vienna, Austria. There the ecorisQ stand served

again as a meeting place, both for members and non-members, for good exchanges on the goals and tools of the association. In that week, we also organised our general assembly in Vienna, which took place on 12 June 2024. Our board member Dr. Chris Philipps kicked-off the GA with a 25 min. presentation on reflections on his 45 years of 'bioengineering' research on landslides and vegetation, which was both very interesting and entertaining. On Friday 14 June 2024 we closed the Vienna week with organising two full-day training courses at the BOKU: one on landslide hazard assessment and one on rockfall hazard assessment using ecorisQ tools and methods.



Future activities

Next year, we will continue the work on improving Rockyfor3D. The idea is to use dozens of recent, well documented rockfall events to optimise the new parameters and integrate the resulting values in a final version.

Further, all improvements made in SlideforMAP will be integrated into a new GUI version. The tool SlideforNET will also be updated. In response to user feedback, a new stand-state diagram will be included in the next web application release in 2025. This diagram will illustrate how root reinforcement varies with tree DBH and canopy cover. It will also indicate the status of root reinforcement for each species for the stand described by the user and the required values of root reinforcement for 5, 10 and 50% failure probabilities.

A new GUI for BankforMAP is in development and planned for release in winter 2025–2026. It will introduce new features, including the ability to specify bank sediment properties via rasters for bank erosion calculations. The tool has also undergone a complete refactoring to improve computational performance. In addition, BankforMAP will now include the option to account for bed erosion, consistent with the functionality available in BankforNET.

Lastly, we will start on the in-depth revision of our website and use the new look for our documentation and manuals.

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Sulgenrain 28
3007 Bern
Switzerland

Title:
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